

**Engineering Standards Data**

# MICROWAVE ASSOCIATES, INC.

## SEMICONDUCTOR DIVISION

BURLINGTON, MASSACHUSETTS  
Western Union FAX-TWX: Burlington, Mass., 942-1 Browning 2-3000

DIFFUSED  
SILICON MESA  
**COMPUTER DIODES**



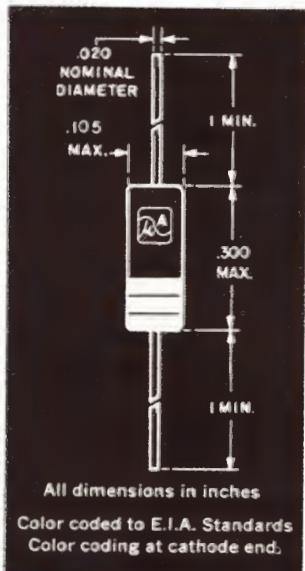
### SUBMINIATURE, FAST-SWITCHING, LOW-CAPACITANCE SILICON DIODE

These diodes are designed for use in circuits requiring exceptionally fast recovery time and response. They are hermetically sealed in subminiature glass cases and have gold-plated, copper-clad steel leads that may be easily welded or soldered.

These extremely rugged diodes withstand the most stringent military environments and can be supplied to meet the most severe reliability specifications.

The reverse current characteristics make them an ideal choice in circuits demanding low leakage currents, especially where the accumulated leakage current from many diodes can cause circuit malfunction.

**IN 908**



#### MAXIMUM RATINGS @ 25°C

	<u>SYMBOL</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
Forward Current Steady-State DC	I <sub>f</sub>		100	mA dc
Peak Surge Current (1 sec.)	i surge		250	mA dc
Reverse Voltage Steady-State DC	V <sub>R</sub>		40	Vdc
Power Dissipation	P		250	mW
Operating & Storage Temperature Range	T	-65	150	°C
Derating above 25°C (free air)		1.5		mW/°C

#### ELECTRICAL SPECIFICATIONS @ 25°C

<u>TEST</u>	<u>TEST CONDITIONS</u>	<u>SYMBOL</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
Forward Voltage Drop	I <sub>F</sub> = 10.0 mA dc	V <sub>F</sub>		1.0	Vdc
Reverse Current	V <sub>R</sub> = -40 Vdc T = 100°C	I <sub>R</sub>	0.1	10.0	μA dc
Capacitance*	V <sub>R</sub> = -6 Vdc	C-6	2.5		pf
Recovery Time	I <sub>F</sub> = 10 mA dc switched to V <sub>R</sub> = 5.0 Vdc through 100 ohm loop to 1.0 ma.	t <sub>rr</sub>	.004		μsec.

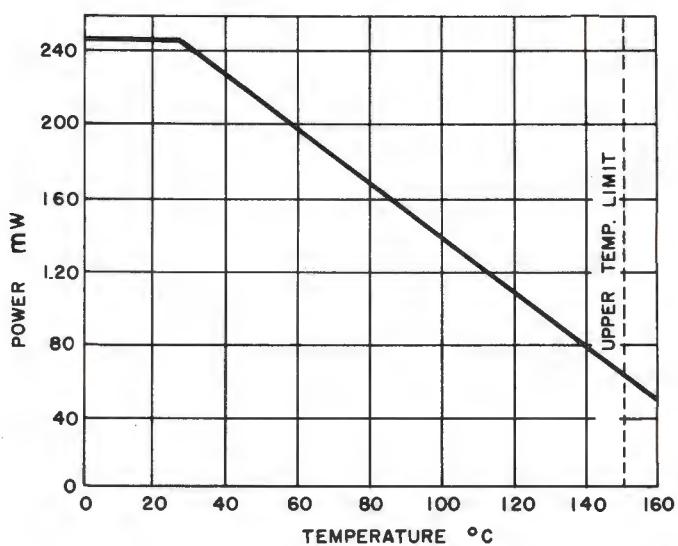
\* Average case capacitance is 0.20 pf. Junction capacitance at zero bias is approximately twice that at -6 volts.

These specifications are in accordance with MIL-S-19500B.

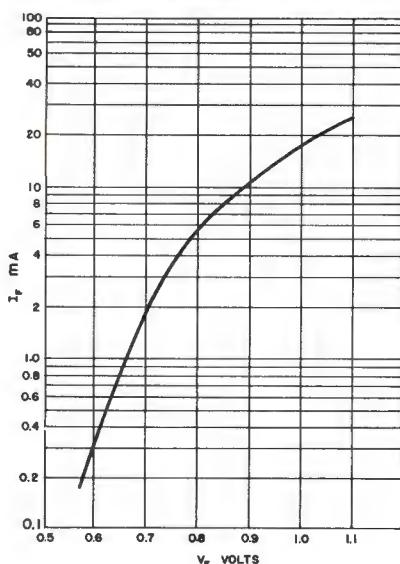
All specifications listed herein are subject to modification.

# TYPICAL ELECTRICAL CHARACTERISTICS

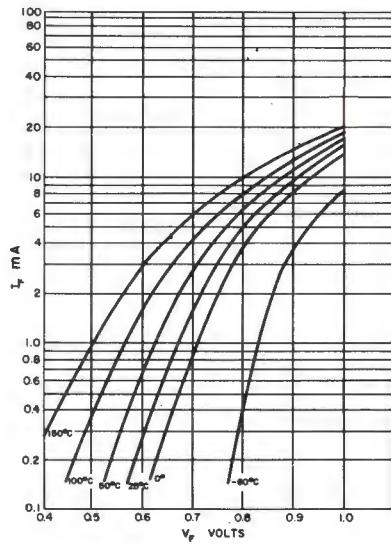
## POWER DERATING



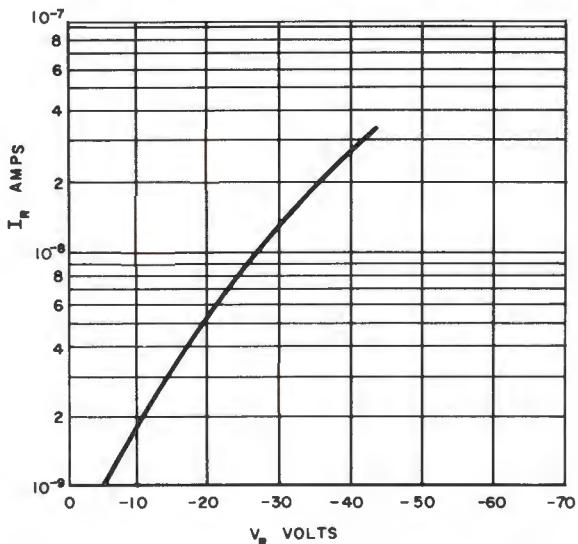
## FORWARD CHARACTERISTIC AT 25°C



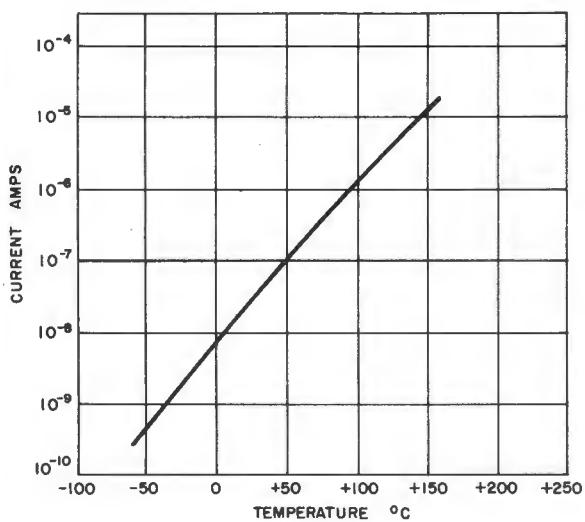
## VARIATION OF FORWARD CHARACTERISTIC WITH TEMPERATURE



## REVERSE CHARACTERISTIC AT 25°C



## VARIATION OF REVERSE CURRENT WITH TEMPERATURE AT -40V



## REVERSE RECOVERY TIME TEST CIRCUIT

